BLOKH, R.L.

Clinical significance of colloid blood reactions in liver diseases. Ter. arkh. 23 no.1:46-51 Jan-Feb 51. (CIML 20:8)

1. Of the Department of Therapeutic Nutrition of the Central Institute for the Advanced Training of Physicians and of the Clinic of Therapeutic Nutrition (Director--Honored Worker in Science Prof. M.I. Pevzner) of the Institute of Nutrition of the Academy of Medical Sciences USSR.

BLOKH, R. L.

BLOKH, R. L. - "The Significance of Colloidal Reactions of the Blood in the Clinic Course of Botkin's Disease." Sub 15 Apr 52, Central Inst for the Advanced Training of Physicians. (Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

BLOKH, R.L.; NAZAROVA, S.A.; SYPCHENKO, O.A.; YEREMEYEV, Yu.N.; YAKSANOVA, A.M.; RUBINSKIY, S.I.

Outdoor day naps during the cold season in the treatment of night sleep disorders. Vop.kur., fizioter. i lech.fiz.kul't. 22 no.3: 17-21 My-Je '57. (MIRA 11:1)

1. Iz Pyatigorskogo klinicheskogo otdeleniya (zav. - prof. Ye.Ya. Stavskaya) Bal'neologicheskogo instituta na Kavkazskikh Mineral'nykh Vodakh (dir. - dotsent I.S.Savoshchenko) i klinicheskogo sanatoriya Pyatigorskogo kurorta (glavnyy vrach O.N.Smolenskaya)
(INSOMNIA) (SLEEP)

BLOKH, R.L.; YESAYAN, V.A.

Effectiveness of antipyretic diet in a general therapeutic complex for chronic gastritis at Pyatigorsk. Zhur.ob.biol. 20 no.2:29-34 Mr-Ap '59. (MIRA 12:5)

1. Iz kliniki (nauchnyy rukovoditel' prof. Ye.Ya.Stavskaya) Gosudarstvennogo bal'neologicheskogo instituta, Pyatigorsk.
(DIETS, in var. dis.
anti-fever diet in gastritis (Rus))
(GASTRITIS, ther.
anti-fever diet (Rus))

BLOKH, R.L., kand.med.nauk; VASIL'YEVA, N.K.; SAAKYAN, A.G.

Effect of radon waters of varying concentrations on some indices of neurohumoral regulation in chronic gastritis. Uch.zap.Pyat.gos. nauch.-issl.bal'n.inst. 3:48-58 '60. (MIRA 15:10)
(RADON--THERAPEUTIC USE) (STOMACH--INFLAMMATION) (NEUROCHEMISTRY)

BLOKH, R.L., kand.med.nauk

Nature and significance of compensation and adaptation in the treatment of chronic diseases of the digestive organs under health resort conditions. Uch.zap.Pyat.gos.nauch.-issl.bal'n.inst. 3:219-230 '60. (MIRA 15:10)
(DIGESTIVE ORGANS--DISEASES) (HEALTH RESORTS, WATERING-PLACES,ETC.)
(ADAPTATION (BIOLOGY))

BLOKH, R.L.; YESAYAN, V.A.; LOBANOVA, I.N.

Diphenylamine test as an index of the inflammatory process in chronic gastritis. Lab.delo 6 no.3:23-26 My-Je '60.
(MIRA 13:7)

1. Bal'neologicheskiy institut (dir. - dotsent I.S. Savoshchenko), Pyatigorsk.
(STOMACH--INFLAMMATION) (DIPHENYLAMINE)

BLOKH, R.L.

Role of radon radiations and the products of its decomposition in bringing about the therapeutic action of radon baths in functional and inflammatory diseases of the stomach. Med.rad. no.9:48-53 '61. (MIRA 15:1)

1. Iz Gosudarstvennogo bal'neologicheskogo instituta na Kavkazskikh Mineral'nykh Vodakh (Pyatigorsk).
(STOMACH--DISEASES) (RADON--THERAPEUTIC USE)

ALEKSANDROVA, V.P.; BEREZINA, N.K.; BERNSHTEYN, A.I.; BERNSHTEYN, S.E.; BLOKH, R.L.; ZINKOVETSKAYA, T.S.; IDESIS, Ye.S.; SMOLENKOVA, O.N.; TOSHINSKIY, I.I.; TSARFIS, P.G.; SHABAD, Ye.T.; SHEYNBERG, O.A.

Professor E.IA. Stavskaia; obituary. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:191 Mr-Ap '61. (MIRA 14:4)
(STAVSKAIA, EVGENIIA IAKOVLEVNA, 1892-1960)

BLOKH, R.L.; NOGALLER, A.M.

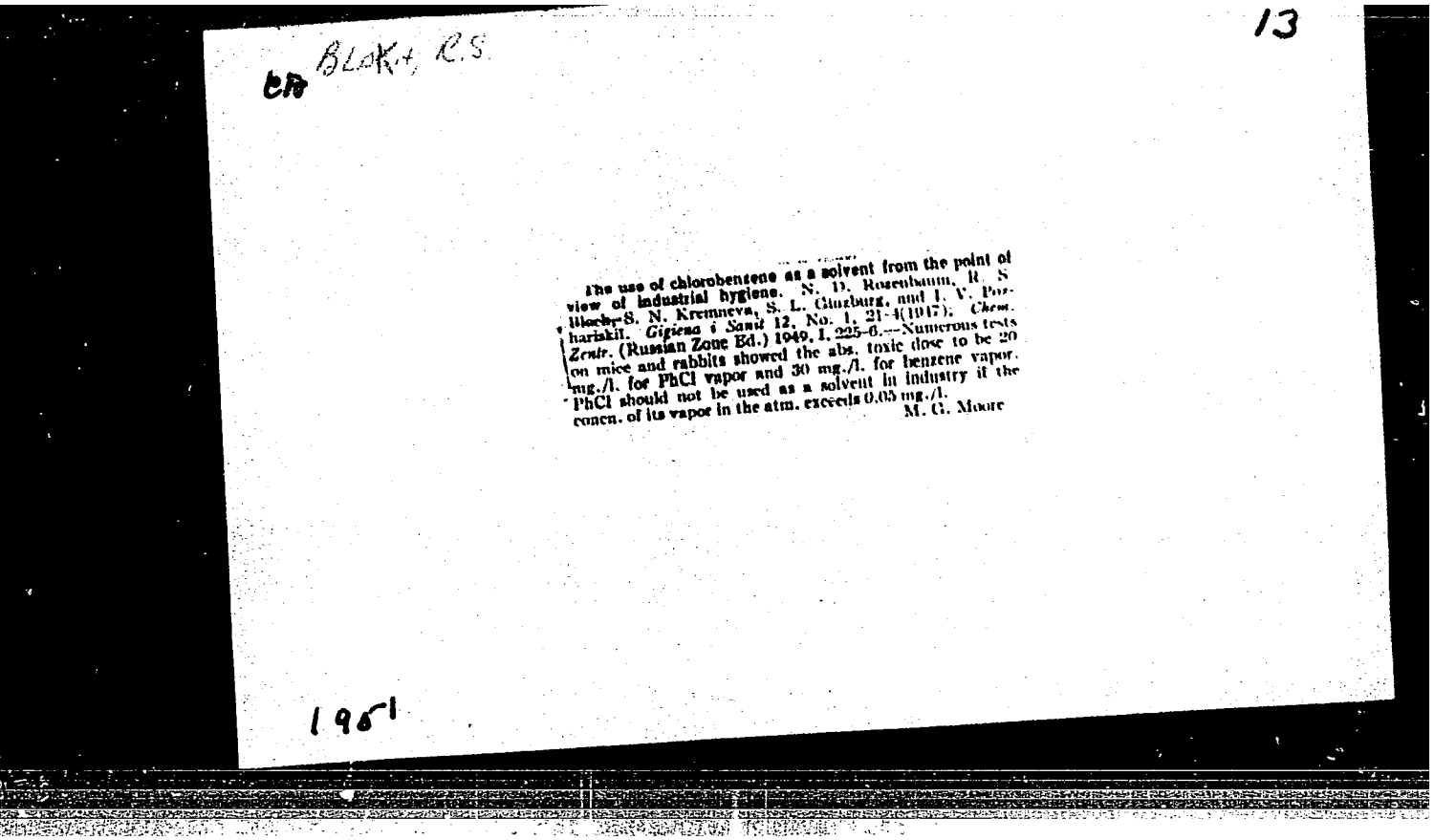
General principles for the differentiated use of a therapeutic diet at a health resort in diseases of the digestive organs. Vop. pit. 21 no.1:9-13 Ja-F '62. (MIRA 15:2)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo bal'neologicheskogo instituta na Kavkazskikh Mineral'nykh Vodakh, Pyatigorsk.
(DIET IN DISEASE) (DIGESTIVE ORGANS--DISEASES)

FRUMIN, S.R.; BLOKH, R.L.

Ceramic L-5 flux for the welding of low-carbon steel. Avtom. svar. 16 no.12:34-39 D '63. (MIRA 17:1)

1. Leningradskiy institut vodnogo transporta.



CA BLOK, R.S.

13

The use of chlorobenzene as a solvent from the point of view of industrial hygiene. N. D. Rosenbaum, R. S. Blokh, S. N. Kremneva, S. L. Ginzburg, and I. V. Portnyagina. *Gigiena i Sanit* 12, No. 1, 21-4(1947). *Chem. Zentr.* (Russian Zone Ed.) 1949, I, 225-6.—Numerous tests on mice and rabbits showed the abs. toxic dose to be 20 mg./l. for PhCl vapor and 30 mg./l. for benzene vapor. PhCl should not be used as a solvent in industry if the concn. of its vapor in the atm. exceeds 0.05 mg./l.
M. G. Moore

1951

S/660/61/000/010/001/001
D258/D301

AUTHOR: Blokh, S.

TITLE: Thermophysical properties of chamotte refractories at high temperatures

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut vykoristannya gazu. Trudy. no. 10, 1961. Teplotekhnika proizvodstva stekla i keramiki, no. 3, 92 - 99

TEXT: The aim of this work was to supplement data regarding physical changes occurring in chamotte refractories at high temperatures. The information was required for programming of firing operations in the glass industry. The tests were performed on brick specimens, both fired and unfired, manufactured from the same grade of clay containing 50.15 SiO_2; 35.22 Al_2O_3 and 1.1 % (CaO + MgO) The loss on iginition was 11.28 %. The burnt specimens were fired at 1450°C. The coefficients of thermal expansion and of heat conductivity, the tensile strength and the modulus of normal elasticity were determined. The coefficient of thermal expansion β, of a

Card 1/4

Thermophysical properties of ...

fired specimen increased smoothly 2.5 x $10^{-6}deg^{-1}$ at 100°C to 3.5 x $10^{-6}deg^{-1}$ at 900°C. The curve of β vs. temperature for an unfired specimen fell from 2.9 x 10^{-6}(100°C) to 1.6 x $10^{-6}deg^{-1}$ (200°C) increased to a maximum of 3.9 x 10^{-6} at 650-700°C and finally fell to 2.8 x $10^{-6}deg^{-1}$ at 900°C. The coefficient of thermal conductivity α was measured by a method similar to that employed by N.A. Zakharikov and S.A. Blokh (Ref. 2: Teplotekhnika proizvodstva stekla (Heat Technology of Glass Production), Izd. AN SSSR K., 1953) in producing glass. In this method the temperatures of 3 points at various depths in a specimen are constantly recorded, while the specimen is heated at the rate of 3°C/min. The expression for the coefficient of heat conductivity a (in $m^2/hr.$) was derived from the equation of heat conductivity, thus

$$a = \frac{1}{2} \cdot \frac{C}{\Delta t_3} \cdot \frac{lp(1 + p)}{1 + \varphi p} \qquad (4)$$

and

Thermophysical properties of ...

$$\varphi = \frac{t_1 - t_2}{t_3 - t_2} = \frac{\Delta t_1}{\Delta t_3},$$

where C is the rate of heating (°C/hr.); t_1, t_2 and t_3 the temperatures measured at 3 fixed points and l and p are the distances between the points $t_1 - t_2$ and $t_3 - t_2$ respectively (in meters). The calculated thickness, i.e. the cross-sectional distance, between the point corresponding to t_1 to that having the lowest temperature s_1 (in meters), is needed for the determination of the mean temperature $\bar{t}$, defined by

$$s_1 = \frac{1}{2} \cdot \frac{\varphi p(2l + p) + l^2}{l + \varphi p} \qquad (3)$$

and

$$\bar{t} = t_2 + \left\{ \frac{l + p}{l(l - 2s_1)} \left[s_1 - \frac{1}{3}(l + p) \right] + 1 \right\} \Delta t_1. \qquad (5)$$

In the case of fired specimens the relationship between α and $\bar{t}$ is linear from 1.8×10^{-3} at 200°C to $2.0 \times 10^{-3} deg^{-1}$ at 900°C. The

Card 3/4

corresponding curve for unfired specimens starts at $1.8 \times 10^{-3} deg^{-1}$ at 200°C. In the latter case, there is no change in α up to 450°C from where it decreases to 1.4×10^{-3} at 700°C. The tensile strength determined at a heating rate of 3°C/min., rose slowly from 1 kg/cm² at room temperature to 6.5 kg/cm² at 700°C; it then rose sharply to 15 kg/cm² at 900°C. Fired specimens showed a constant value of 36 kg/cm² throughout the whole temperature range. The modulus of normal elasticity of unfired specimens was 4.10^4 kg/cm² up to 800°C and rose to about 6.10^4 kg/cm², at 900°C, while that of fired specimens was 2.10^5 kg/cm² throughout. There are 5 figures and 3 Soviet-bloc references.

S/169/61/000/005/027/049
A005/A130

AUTHORS: Blokh, Ya.L., Glokova, Ye.S., Kaminer, N.S.

TITLE: On the barometric effect of cosmic rays

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 5, 1961, 12, abstract 5 G 97. (Tr. Yakutskogo fil. AN SSSR. Ser. fiz., 1960, no. 3, 74-77)

TEXT: The authors discuss a method of taking into account the barometric effect in recording the μ-meson and neutron components of cosmic rays which was used in a practical work. It follows from the analysis: 1) in recording the hard component of cosmic rays, the barometric effect can be determined with sufficient accuracy on the assumption of a linear connection between variations in barometric pressure and the intensity of cosmic rays; 2) in order to determine the barometric effect in recording the neutron component, the linear approximation is no longer sufficient, and the exponential dependence of cosmic ray intensity on atmospheric pressure has to be taken into account. The authors briefly consider a

Card 1/2

On the barometric effect of cosmic rays

S/169/61/000/005/027/049
A005/A130

method of introducing barometric corrections which is based on a logarithmic representation of cosmic ray intensity data.

[Abstractor's note: Complete translation.]

Card 2/2

ZAKHARIKOV, N.A., kandidat tekhnicheskikh nauk; BLOKH, S.A., inzhener.

Increasing the productivity of glass pot annealing furnaces and improving their quality. Trudy Inst.isp.gaza AN URSR 1:44-56 '53. (Glass manufacture) (Furnaces) (MLRA 9:6)

ZAKHARIKOV, N.A., kandidat tekhnicheskikh nauk; BLOKH, S.A., inzhener.

Design analysis and performance data on glass pot annealing furnaces using recirculated combustion products. Trudy Inst.isp.gaza AN URSR 1:57-68 '53. (MLRA 9:6)
(Furnaces) (Glass manufacture)

ZAKHARIKOV, N.A., kandidat tekhnicheskikh nauk; BLOKH, S.A., inzhener.

Thermal stresses in sheet glass and glass tubes. Trudy Inst. isp. gaza AN URSR 2:64-82 '54. (MLRA 9:10)

(Glass manufacture) (Thermal analysis) (Strains and stresses)

BLOKH, S. A. Cand Tech Sci -- (diss) "Study of the thermal processes occuring during the kilning of refractory chamotte materials for the manufacture of glass." Minsk, 1957. 18 pp (Min of Higher Education USSR. Belorussian Polytechnic Inst), 100 copies (KL, 3-58, 97)

ROZHANSKIY, A.I.; BLOKH, S.A.; ZAKHARIKOV, N.A.

Carburizing the gas torch in glass furnaces. Trudy Inst. isp. gaza AN URSR no.5:68-76 '58. (MIRA 11:12)
(Glass furnaces) (Gas torches)

BLOKH, S.A.

Conditions for firing grog floater bars. Trudy Inst. isp. gaza AN URSR no.5:109-126 '58. (MIRA 11:12)
(Glass furnaces) (Refractory materials)

BLOKH, S.A.; MAYEVSKIY, Ye.R.; SHEYKINA, K.A.

Investigating the operation of kilns for firing grog floater bars. Trudy Inst. isp. gaza AN URSR no.5:127-134 '58. (MIRA 11:12)
(Refractory materials) (Kilns)

AUTHORS: Zakharikov, N. A., Blokh, S. A., Sen', Z. P., SOV/72-58-9-9/20
Lesovoy, N. V., Yarmak, O. F.

TITLE: Non-Recurrent Baking of Porcelain (Skorostnoy odnokratnyy obzhig farfora)

PERIODICAL: Steklo i keramika, 1958, 15 Nr 9, pp 20 - 24 (USSR)

ABSTRACT: This is an investigation of the influence of the rate of heating of the products upon their quality, if they are baked by a non-recurrent process without casing. The tests were carried out with porcelaine cups, sizes B-53 and "Kiyevskaya". The ingredients of the batch are given in table 1 and the results for the chemical analysis (in percent) are given in table 2. The molecular formula for the batch is also presented. For increasing the mechanical strength of the semi-finished porcelaine product 0,3% of carboxy-methyl cellulose were added to the batch. 0,2% of fluid glass and 0,1% of soda were used in the preparation of the electrolyte. The porcelaine cups were cast in plaster molds so fashioned to give a wall strength of 1,5-2,5 mm. Moisture is driven off to

Card 1/4

a content of 1% under natural conditions. The ware is then glazed with a O-45VZPA hand operated atomizer. The raw materials for the glaze are listed in table 1, their chemical analysis is detailed in table 2. The molecular formula of the glaze is also given. The glazed cups were dried to a humidity of 0,5% and then baked in the laboratory furnace (Fig 1). The maximum temperature in the furnace was 1320°. The cups were placed on the bottom of the furnace without a casing and were cooled according to a schedule specified by the diagram in figure 2. The heating and baking period at this temperature varied between 2-5 hours. Data concerning the baking conditions are presented in table 3. The degree of whiteness of the body was determined by means of a FM photometer, whereas the water absorption and the heat resistance of the test products was checked according to GOST 7591-55. The best whiteness was obtained with combustion gases with a CO content of 3-4% (Fig 3). The rate of heating varied between 60 and 300° per hour. At this rate the quality of the products obtained is by no means inferior

to that of the products from the Baranovka and Kiyev Works. Their water absorption does not exceed 0,39% . The specimens corresponded to the requirements imposed upon them in the checking of thermal and chemical resistivity. The glaze also exhibited a customary quality. Investigations of the microstructure of the body were carried out with a MP-3 microscope and X-ray structural analyses were made on the URS-70 instrument. In table 4 the structures of customary and of test products are portrayed. As can be seen they do not differ at all. Figures 4 to 8 contain micrographs of polished porcelaine sections made after different baking periods. They do not indicate any essential variations in structure. The duration of baking is therefore not determined by the physical and chemical transformations in the porcelaine but only by the heating facilities of the furnaces. The cooling process has hitherto not been the object of minute research. Preliminary experiments showed that a cooling of porcelaine cups from 1320° to 100° is possible within 8 - 10 minutes without impairing the quality of the product. The experiments showed that a non-recurrent burning without casing

of porcelaine products in short automatic continuous car tunnel furnaces is possible. There are 8 figures and 4 tables.

ASSOCIATION: Institut ispol'zovaniya gaza AN Ukrainskoy SSR (Institute of Gas Utilization AS Ukr SSR)
Nauchno-issledovatel'skaya laboratoriya Kiyevskogo sovnarkhoza (Scientific Research Institute of the Kiyev Council of National Economy)

BLOKH, S.A.

Efficient methods for kilning firebricks. Stek.i ker. 17 no.7:35-38 Jl '60. (MIRA 13:7)
(Glass furnaces) (Firebrick)

S/081/62/000/020/016/040
B158/B101

AUTHOR: Blokh, S. A.

TITLE: Thermo-physical properties of fireclay refractories at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1962, 348, abstract 20K178 (Tr. In-t ispol'zovaniya gaza AN USSR, no. 10, 1961, 92-99)

TEXT: Descriptions are given of methods for determining: the coefficient of thermal expansion of refractory products (RP) using the dilatometer of V. G. Permyakov; the coefficient of temperature conductivity by a method of calculation using data on temperatures through the cross-section of RP whilst being heated; the limit of tensile strength and the modulus of normal elasticity of RP whilst being heated. It is established that: the coefficient of thermal expansion of RP decreases when the dried brick clay is heated to 200°C as a result of shrinkage in the temperature range 100-200°C; it increases with a further rise in temperature to 700°C, but when the temperature reaches >700°C it falls off again as a result of

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B158/B101

a glass phase forming in the specimen; the thermal diffusivity of RP in the range 450-600°C falls sharply as a result of the constitution water being rapidly removed. [Abstracter's note: Complete translation.]

Card 2/2

ZAKHARIKOV, N.A., doktor tekhn.nauk; BLOKH, S.A.

Rapid drying of porcelain. Stek. i ker. 18 no.11:25-28 N '61.
(MIRA 15:3)

(Drying apparatus) (Porcelain)

ZAKHARIKOV, N.A.; NAYDENOV, V.V.; BLOKH, S.A.; SOLDATOV, G.A.; LEVITSKIY, V.K.; KUZNETSOV, V.V.; SPEKTOR, M.P.

Radiation gas drying of structural ceramic products. Stek. i ker. 19 no.7:21-25 Jl '62. (MIRA 15:7)
(Tiles--Drying)

BLOKH, S. A. (Institute of use of gas of Academy of Sciences of Ukrainian SSR)

"Results of investigations in the processes of radiation drying"

Report presented at the Section on Heat and Mass Transfer, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics, Kiev, 2-4 Apr 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321, JPRS 24,651. 19 May 1964.

BLOKH, S.A., kand. tekhn. nauk

Quick-drying method for pottery wares. Stek. i ker. 20 no.7: 26-28 Jl '63. (MIRA 17:2)

1. Institut ispol'zovaniya gaza AN UkrSSR.

BLOKH, S.A., kand. tekhn. nauk; VOLOVIK, Yu.I., inzh.; SOLDATOV, G.A., inzh.; LEVITSKIY, V.K., inzh.

High temperature gas spray drying of ceramic suspensions. Stek. i ker. 22 no.8:21-23 Ag '65. (MIRA 18:9)

1. Institut gaza AN UkrSSR (for Blokh, Volovik). 2. Khar'kovskiy plitochnyy zavod (for Soldatov, Levitskiy).

BLOKH, S.A., kand.tekhn.nauk; GUZ, D.B., inzh.; RUBASHEVSKIY, I.Ya., inzh.; BAUMAN, A.Zh., inzh.; SEN', Z.P., kand.tekhn.nauk; KHARITON, Ya.G., inzh.

Conveyor kiln with a walking hearth for rapid saggerless firing of porcelain. Stek. i ker. 23 no.1:29-32 Ja '66. (MIRA 19:1)

1. Institut gaza AN UkrSSR (for Blokh). 2. Konstruktorskoye byuro Ukrainskogo soveta narodnogo khozyaystva (for Rubashevskiy, Bayman). 3. Ukrainskiy institut stekol'noy i farforo-fayansovoy promyshlennosti (for Sen', Khariton).

BLOKH, S. I., Cand of Agri Sci -- (diss) "Effectiveness of Meat Fattening of Pigs on Various Types of Rations," Khar'kov, 1959, 17 pp (Khar'kov Veterinary Institute) (KL, 8-60, 117)

BLOKH, S.I., kand. sel'khoz. nauk; BORZOV, V.V., kand. sel'khoz. nauk; YURCHENKO, G.T.[IUrchenko, H.T.], inzh.-mekhanik; VOLOSOZHAR, V.A., kand. ekon. nauk; GERTSEN, Ye.I.[Hertsen, IE.I.], kand. sel'khoz. nauk; DANILENKO, I.A.[Danylenko, I.A.] red.; SMIRNOV, O.V.[Smyrnov, O.V.], red.; NEMCHENKO, I.Yu., [Niemchenko, I.IU.], tekhn. red.

[Advanced work practices on cattle farms] Peredovi metody raboty na fermakh velykoi rohatoi khudoby. 2., vypravlene i dop. vyd. Za red. I.A.Danylenka. Kyiv, Derzhsil'hospvydav URSR, 1963. 203 p. (MIRA 16:10)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Danilenko).
(Dairying)

BLOKH, S. M.

20162 BLOKH, S. M.

Profilaktika likhoradochnykh poslerodovykh zabolevanii. Vracheb. delo, 1949, No. 6, stb. 531-34.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

BERNSHTEYN, M.A.; BLOKH, S.S.; BELOV, V.I.

Certain results of deep-well investigations of gas wells with MGG-2_u and DGM-4/2 manometers. Gaz. prom. 9 no.4:7-10 '64.
(MIRA 17:8)

KUTUKOV, A.I., red.; ZAYTSEV, A.P., red.; DROGALIN, G.V., red.; POLESIN, Ya.L., red.; KOSTYUKOV, N.N., red.; KURAS, D.M., red.; LUZHNIKOV, A.M., red.; RODIONOV, I.S., red.; BLOKH, S.S., red.; SULTANOV, D.K., red.; BIBILUROV, V.P., red.; PETROV, A.I., red.; KHARCHEVNIKOV, N.M., red.; ANDRIANOV, K.I., red.; GADZHINSKAYA, M., red.izd-va; BERESLAVSKAYA, L.Sh., tekhn.red.

[Safety regulations for petroleum and gas producing industries] Pravila bezopasnosti v neftegazodobyvaiushchei promyshlennosti. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 123 p. (MIRA 14:3)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po nadzoru za bezopasnym vedeniem rabot v promyshlennosti i gornomu nadzoru. 2. TSentral'nyy apparat Gosgortekhnadzora RSFSR (for Kutukov, Zaytsev, Drogalin, Polesin, Kostyukov, Kuras, Luzhnikov, Rodionov, Blokh). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut po tekhnike bezopasnosti (for Sultanov). 4. Upravleniya okrugov Gosgortekhnadzora RSFSR (for Bibilurov, Petrov, Kharchevnikov). 5. TSentral'nyy komitet profsoyuza rabochikh neftyanoy i khimicheskoy promyshlennosti (for Andrianov).

(Oil fields--Safety measures)
(Gas industry--Safety measures)

BLOKH, S.S., inzh.

Using liquified gases. Bezop.truda v prom. 5 no.1:17-19 Ja '61.
(MIRA 14:2)
(Liquefied petroleum gas)

BLOKH, S.S.; BUCHIN, A.N.; KRYUCHKOV, B.N.; REYTENBAKH, G.R.; SINYAVSKAYA, N.D.

Certain features of the technological process in the development of the Western-Tebuk oil field in the Komi A.S.S.R. Nauch-tekh. sbor. po dob. nefti. no.21: 54-58 '63. (MIRA 17:5)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut i Pechorskiy nauchno-issledovatel'skiy ugol'nyy institut.

BLOKH, S.S.; VOINOV, V.V.; TRUSHINA, K.G.

Certain geological features of the Middle-Devonia producting layers in the Western Tebuk oil field. Nauch.-tekh.sbor. po dob. nefti no. 21:13-19 '63. (MIRA 17:5)

1. Pechorskiy nauchno-issledovatel'skiy ugol'nyy institut i Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

BLOKH, S.S.; REYTENBAKH, G.R.

Results of the experimental exploitation of the Western-Tebukskoye oil field. Neftepром. delo no. 9:3-6 '63. (MIRA 17:4)

1. Neftegazovyy otdel Pechorskogo nauchno-issledovatel'skogo ugol'nogo instituta.

BLOKH, S.S.

[redacted] Determining the parameters of producing strata forming an edge-water region in the Western Tebuk oil field. Neftepром. delo. no. 9:5-7 '64. (MIRA 17:10)

1. Ukhtinskiy neftegazovyy otdel Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnogo gaza.

BLOKH, S.S.; VASSERMAN, V.O.

Using electronic computers for processing well data by the built-up pressure method. Nefteprom.delo no.10:40-41 '65. (MIRA 19:1)

1. Ukhtinskiy nefte-gazovyy otdel Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnogo gaza i Ukhtinskiy nefte-gazovyy kombinat.

BLOKH, Samuil Yakovlevich; MIRKIN, Samuil L'vovich; DANILEVICH, Ye.P.; GOLOVNINA, Ye., red.; LEBEDEV, A., tekhn.red.

[Handbook of prices for building materials and equipment approved during the period from July 1, 1955 to January 1, 1958] Spravochnik tsen na stroitel'nye materialy i oborudovanie, utverzhdennykh v period s 1 iiulia 1955 g. po 1 ianvaria 1958 g. Moskva, Gosfinizdat. Pt.4. 1958. 1182 p. (MIRA 12:1)
(Building materials--Prices)

BLOKH, Samuil Yakovlevich; DANILEVICH, Ye.P.; GOLOVNINA, Ye., red.; LEBEDEV, A., tekhn.red.

[Price manual for materials and equipment approved for the period January 1, 1958 to January 1, 1959] Spravochnik tsen na materialy i oborudovanie, utverzhdennykh v period s 1 ianvaria 1958 g. po 1 ianvaria 1959 g. Moskva, Gosfinizdat. Pt.5. 1959. 672 p. (MIRA 12:9)
(Industrial equipment--Prices)

Blokh, V.A.

PHASE I BOOK EXPLOITATION SOV/4017

Leningradskiy metallicheskiy zavod. Otdel tekhnicheskoy informatsii

Issledovaniya elementov parovykh i gazovykh turbin i osevykh kompressorov (Investigations of the Components of Steam and Gas Turbines and Axial-Flow Compressors) Moscow, Mashgiz, 1960. 488 p. (Series: Its: Sbornik, No. 6) Errata slip inserted. 3,200 copies printed.

Sponsoring Agency: RSFSR. Leningradskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. Upravleniye tyazhelogo mashinostroyeniya.

Ed.: A.S. Zil'berman, Candidate of Technical Sciences; Eds. of Publishing House: V.P. Vasil'yeva and N.Z. Simonovskiy; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on the Design and Operation of Machines (Leningrad Division, Mashgiz): F.I. Fetisov, Engineer; Editorial Board of Series: A.S. Zil'berman, Candidate of Technical Sciences; M.M. Koren', Engineer; V.K. Naumov, Candidate of Technical Sciences; and I.N. Shibalov, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of turbine-construction plants and related organizations and may also be used by engineers and technicians at power plants employing steam and gas turbines.

COVERAGE: The collection contains 43 reports which present the methods and results of investigations of the working process and the statics and dynamics of the operation of turbine and axial-flow compressor components. Also described are test setups, devices, and apparatus. The first part of the collection deals with the aerodynamics of turbine and compressor components. The following members of the aerodynamic, compressor, and turbine laboratories took part in the work: D.M. Reshet'ko, V.I. Zemlyanskiy, Ye.A. Rusakova, the technicians T.Ya. Kiyanova, V.I. Karebach, N.D. Yegorova, and innovators N.K. Tutayev, and I.I. Gribanov. The second part of the collection consists of reports which illustrate that part of the work of the Laboratory (Central Laboratory of the Design Office for Steam and Gas Turbines of the Leningrad Metal Plant) concerned with the study of vibrations of turbines and their components, particularly the blades. The following members of the vibration laboratory participated in the work: Engineers I.D. Kovikova, G.L. Lyudin, and V.I. Melent'yeva, technicians and workers A.N. Krasheninnikov, V.I. Zimin, Yu.G. Kazingov, and Ye.P. Kudryavtsev. The third part is concerned with the calculation and experimental study of the state of stress and the deformations of turbine components. This work was performed by the Turbine-Component Laboratory. Personalities mentioned are the head of this laboratory M.M. Koren', Engineers Ye.S. Zugrova and I.V. Urinson, technicians and workers S.P. Senchenok, and Z.K. Shul'gina. The last part contains articles dealing with instruments, apparatus, and test setups. At the end of the collection methods for producing rotating parts of experimental turbines and compressors are presented. Personalities mentioned are the supervisors of the shop of the laboratory N.N. Frolova and G.P. Gavrilova, the leading innovators Ye.V. Markova, I.I. Gruzdeva, and V.P. Troynikova. References are to be found at the end of 24 of the 43 articles.

BLOKH, V.A.

57

PHASE I BOOK EXPLOITATION SOV/5460

Leningradskiy metallicheskiy zavod. Otdel tekhnicheskoy informatsii.

Nekotoryye voprosy tekhnologii proizvodstva turbin (Certain Problems in the Manufacture of Turbines) Moscow, Mashgiz, 1960. 398 p. (Series: Its: Trudy, vyp. 7) Errata slip inserted. 2,100 copies printed.

Sponsoring Agency: RSFSR. Sovet narodnogo khozyaystva Leningradskogo ekonomicheskogo administrativnogo rayona, Upravleniye tyazhelogo mashinostroyeniya, and Leningradskiy dvazhdy ordena Lenina metallicheskiy zavod. Otdel tekhnicheskoy informatsii.

Ed. (Title page): G. A. Drobilko; Editorial Board: Resp. Ed.: G. A. Drobilko, B. A. Glebov, A. M. Mayzel', and M. Kh. Mornik; Tech. Ed.: A. I. Kontorovich; Managing Ed. for Literature on Machine-Building Technology: Ye. P. Naumov, Engineer, Leningrad Department, Mashgiz.

PURPOSE: This collection of articles is intended for technical personnel in turbine plants, institutes, planning organizations, as well as for production innovators.

Card 1/12

57

SOV/5460

Certain Problems (Cont.)

COVERAGE: The experience of the LMZ (Leningradskiy metallicheskiy zavod - Leningrad Metalworking Plant) in the manufacture of modern large-capacity turbines is presented. Methods for the rationalization of basic manufacturing processes and for the mechanization and automation of manual operations are given. Descriptions of attachments and tools designed by LMZ for improving labor productivity and product quality are provided, and advanced inspection methods discussed. References accompany some articles. No personalities are mentioned. There are 26 references: 25 Soviet and 1 English.

TABLE OF CONTENTS:

Card 2/12

S/123/61/000/012/030/042
A004/A101

AUTHOR: Blokh, V. A.

TITLE: Moment scales for the weighing of turbine blades

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 3, abstract 12Zh13 (V sb. "Nekotoryye vopr. tekhnol. proiz-va, turbin". [Tr. Leningr. metallich. z-da, no. 7]. Moscow-Leningrad, 1960, 237-239)

TEXT: The author describes moment scales making it possible to match turbine blades according to their weight and moment(of inertia), which eliminates any unbalance of the turbine disk after the blades have been fitted. The moment scales consist of the stand carrying a packing of knives by which the knife-edge bearings of the balance arm are borne. The end of the right balance arm carries a clamping device with interchangeable pin stops, which is intended for the setting and clamping of the tail part of the blade being weighed. The length of this arm from the knife-edge bearing to the pin stops is equal to the radius of the turbine disk summit on which the blade being weighed is fastened. On the left balance arm counter-weights are mounted. The scales are fixed with the aid of an arrest located under the balance arm. Under the lower screw of the clamping

Card 1/2

Moment scales for the weighing of turbine blades

S/123/61/000/012/038/042
A004/A101

device the plate of a commercial dial scales is placed on which rests the right balance arm of the moment scales with the fastened blade being weighed. The author gives an account of the scales operation. There are 2 figures.

R. Skulkova

[Abstracter's note: Complete translation]

Card 2/2

BLOKH, V.A., inzh.; SYRKIN, V.S., inzh.

Automatic rotation of the rotor of a turbine unit. Energomashinostroenie 10 no.11:36-38 N '64 (MIRA 18:2)

BLOKH, Vladimir Georgiyevich; MISHKEVICH, G.I., otvetstvennyy red.; FRUMKIN, P.S., tekhn. red.

[Reorganization of the management of a factory] Opyt perestroiki upravleniia zavodom. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1958. 65 p. (MIRA 11:7)

(Industrial management)

BLOKH, Vladimir Georgiyevich; MISHKEVICH, G.I., otv.red.; LEVOCHKINA, L.I., tekhn.red.

[A plant without workshops; practice in reorganizing production management] Zavod bez tsekhov; opyt perestroiki upravleniia proizvodstvom. Izd.2., dop. i perer. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1959. 89 p. (MIRA 12:12)
(Industrial organization)

MIL'KOV, K.; BLOKH, V.; AMEL'CHENKO, M.

Toward a radical reorganization of management. Sots.trud 4 no.7:106-115 Jl '59. (MIRA 13:4)

1. Nachal'nik otdela truda i zarabotnoy platy Karel'skogo sovnarkhoza (for Mil'kov). 2. Direktor Moskovskogo zavoda svetotekhnicheskikh izdeliy (for Blokh). 3. Nachal'nik otdela truda i zarabotnoy platy Upravleniya metallurgicheskoy promyshlennosti.

(Industrial organization)

BLOKH, V.I. DECEASED 1962/5
1961

SEE ILC

ELASTICITY

BLOKH, Veniamin Izrailevich, prof.; VINOKUROV, L.P., doktor tekhn.nauk, otv. red.; DEYEV, V.M., kand. tekhn. nauk, otv. red.; VAYNBERG, D.A., red.

[Theory of elasticity] Teoriia uprugosti. Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 483 p. (MIRA 17:7)

BLOKH, V. K.

K voprosu ob usilenii provoznoi sposobnosti Kazalinskogo napravleniia. Zheleznodorozhnaia liniia Kinel-Kazalinsk-Tashkent. / On the question of raising the transport capacity of Kazalinsk direction. Railway line Kinel-Kazalinsk-Tashkend/. (Transportonow troitel'stvo. 1935, no. 1, p. 28-31, sketch).
LC: HE7.T7

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

BLOKH, YA. L.

SANIN, A.A.; BLOKH, Ya.L.; DUBROVIN, M.M.

Prolonging the life of self-quenching counters using radio engineering methods. Prib. i tekh. eksp. no.1:58-59 Ja-F '57. (MIRA 10:6)
(Geiger-Muller counters) (Nuclear counters)

BLOKh, Ya. L.

AUTHOR: Blokh, Ya. L. and Dorman, L. I. 120-2-13/37

TITLE: Meteorological Coefficients for 4π and 2π Counter Telescopes. (Meteorologicheskiye Koeffitsiyenty dlya Kubicheskogo i Polukubicheskogo Teleskopov.)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.2, pp. 46 - 48 (USSR).

ABSTRACT: Complex telescopes for continuous registration of the cosmic rays intensity will be extensively used during the coming I.G.Y. The author determines the theoretical values of the barometric pressure coefficient and of the temperature coefficient which can be used with cubical telescopes at the sea level and to the semi-cubical telescopes under the surface of the earth, at depths of 25 and 55m of the water equivalent. The use of these coefficients will free experimental data from the distorting influence of the varying meteorological conditions. According to the theory (Ref. 1) the relative change

$$\delta N_\mu / N_\mu = \alpha_{bar} \delta h_o + \int_0^{h_o} W_t(h).\delta T(h)dh,$$

of μ-mesons intensity due to a relative barometric change δh_o at the observation level and the relative temperature

Card 1/3

Meteorological coefficients for 4π and 2π Counter Telescopes.

change $\delta T(h)$ is given by eq.(1). This expression has two coefficients α_{bar} - atmospheric pressure coefficient in %/millibar and $W_T(h)$ - density of the temperature coefficient in %/1°C atm. Both coefficients can be determined from the two equations (2), where $W_T(h,\varepsilon)$ and $\alpha_{bar}(\varepsilon)$ are the meteorological coefficients for directed intensities. The values of $W_T(h,\varepsilon)$ for subterranean measurements were obtained in Ref.2 and for the sea level measurements in Ref.3. Results of a calculation of $\alpha_{bar}(\varepsilon)$ are given in the form of a graph (Fig.2) for various assumed values of the effective index n of the differential spectrum of π-meson production. Using $\alpha_{bar}(\varepsilon)$ and $W_T(h,\varepsilon)$ as defined in eq.(2), the required coefficients are presented graphically in Figs. 3 and 4 (cf. Ref.2). The meteorological coefficients should not depend in practice on the latitude of the observation point, nor on the local climatic conditions. Six graphs of numerical

Meteorological coefficients for 4π and 2π Counter Telescopes.

reference are given. There are 7 references, 5 of which are Slavic.

SUBMITTED: November 3, 1956.

ASSOCIATION: Scientific and Research Institute of Terrestrial Magnetism, of the Ionosphere and of Radiowave Propagations. (Nauchno-Issledovatel'skiy Institut Zemnogo Magnetizma, Ionosfery i Rasprostraneniya Radiovoln.)

AVAILABLE: Library of Congress.

Card 3/3

BLOKH, Ya. L.

AUTHORS: Blokh, Ya.L., and Korablev, L.N. 120-5-13/35

TITLE: Automatic Recording of Cosmic Ray Outburst (Avtomaticheskaya registratsiya vspyshek kosmicheskogo izlucheniya)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.5, pp. 58 - 59 (USSR).

ABSTRACT: Studies of major solar outbursts in the intensity of cosmic radiation (Ref.1) are of major interest in the solution of the problem of the mechanism of production of cosmic rays on the sun. To solve the theoretical problem it is necessary not only to detect the presence of an increase in the intensity but also to know the moment at which the intensity begins to increase (to within a minute), the rate of growth up to the maximum, and the rate of fall to the normal level thereafter. In accordance with the recommendation of the International Committee for the IGY (15.9.56) it is necessary to record increases in the intensity of cosmic rays of the order of 10% and their beginning to ± 0.5 min. A method for an automatic recording of the beginning of an increase in the intensity of the hard component of cosmic radiation is now described. Increases greater than or equal to 5% can be measured with an accuracy of less than 0.5 min. The device includes a fast recorder of the number of coincidences seen by a cubic telescope

Card1/3

Automatic Recording of Cosmic Ray Outburst. 120-5-13/35

which is also used for the continuous recording of cosmic radiation during the IGY. This telescope consists of three rows of counters with a 10 cm lead screen between the second and the third row. The instrument consists of two independent systems (2 cubes). Coincidences between pulses from the first, second and third rows are produced by the hard component. Apart from the triple coincidences, double coincidences between the first and the second and the second and the third rows are also recorded. These coincidences are produced by the general and the hard component in a wide solid angle and can be used to determine the soft component. The beginning of the solar outburst is determined from the double coincidences (first and second row) which record the general component. This increases the statistical accuracy and the accuracy of fixing of the beginning of an outburst since the number of coincidences 1-2 is larger by a factor of 2.4 than the number of coincidences 1-2-3. In addition, the coincidences 1-2 record the general component which in itself is more sensitive to solar outbursts than the hard component (Ref.2). In summing up the number of double coincidences 1-2 the total number of pulses increases to 240 000 per hour which in half-a-minute gives the statistical

Card2/3

Automatic Recording of Cosmic Ray Outburst. 120-5-13/35

accuracy of ± 2.2%. In order to increase the stability of the working threshold, the recorded radiation is compared with the frequency of the standard oscillator which is stable to 0.1 - 0.01%. The comparison is carried out by means of a discrete count of the radiation pulses and the pulses from the oscillator using the counter circuit shown in Fig.1. There are 1 figure and 3 Slavic references.

ASSOCIATION: Scientific Research Institute for Geomagnetism of the Ionosphere and Radio-wave Propagation (Nauchno-issledovatel'skiy Institut zemnogo magnetizma ionosfery i rasprostraneniya radiovoln)

SUBMITTED: January 14, 1957.

AVAILABLE: Library of Congress

Card 3/3

BLOKH, YA.L.

"ELECTROMAGNETIC CONDITIONS IN INTERPLANETARY SPACE ACCORDING TO COSMIC RAY VARIATION DATA FROM AUGUST 20 TO SEPTEMBER 10, 1957"
Ya.L. Blokh, E.S. Glokova, L.I. Dorman

Using correlation coefficients to analyze the data on cosmic ray variation provided by the World International Network of Stations for the period from August 20 to September 10, 1957 (the period which witnessed several magnetic storms), it is shown that these variations could be explained by assuming the following picture for the state of interplanetary space during that period. We assumed that for a long time there existed in interplanetary space a comparatively extensive, slow corpuscular stream with a "frozed" magnetic field of 10^{-5} gauss. Within the extensive stream a narrow fast stream with a "frozed" magnetic field of 10^{-4} gauss was ejected from the Sun and captured the Earth with its front edge at a distance of approximately one fourth of the stream's width from thr front edge. A shock wave originated in front of that stream and caused an increase in cosmic ray intensity several hours before the onset of the magnetic storm. Several days later, the Earth was captured by another stream with magnetic field perpendicular to the direction of propagation. In this stream the moving "frozed" magnetic field induced a large electrical field, which, in turn, had evoked a substantial anistropy of cosmic rays.

report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

BLOKH, YA.L.

"CONCERNING THE METEOROLOGICAL EFFECT OF THE COSMIC RAY SOFT COMPONENT"
YA.L. Blokh

By means of the data obtained at Krasnaya Pakhra (Moscow) through continuous recording of the cosmic ray soft compoment with the cubic telescope counter designed for the Soviet network of stations by the author, the variations of atmospheric origin were studied. It is shown that these consist of barometric and sea level temperature effects and also of the temperature effect throughout the atmosphere. The obtained results are analysed from the point of view of Dorman's theory of meteorological effects of the soft component.

report presented at the International Cosmic Ray Conference, Moscow 6-11 July 1959

BLOKH, Ya. L.
BLOHK, Ya. L.

"COSMIC RAY INTENSITY INCREASE EFFECT PRECEDING MAGNETIC STORMS"
Ya.L. Blokh, L. I. Dorman, N.S. Kaminer

By means of the experimental data obtained through continuous recording of cosmic ray intensities by an international network of stations, a detailed study is made of the cosmic ray intensity increase effect preceding magnetic storms. A statistical relationship is established between this effect and storms of different types: with sudden and gradual beginning; effective and ineffective (in relation to the decrease in cosmic ray intensity); very large, large and moderate storms, etc. On the basis of the data on different cosmic ray components, the energy spectrum of the particles which determine the increase effect preceding the onset of magnetic storms is determined. An estimate is made of the dependence of duration and amplitude of the effect upon the primary particle energy. A possible interpretation of the obtained results is given.

report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

BLOKH, YA.L.

"DETERMINATION OF THE NATURE OF THE EARTH'S CAPTURE BY CORPUSCULAR STREAM AND THE STREAM VELOCITY BY COSMIC RAY VARIATIONS DURING DIFFERENT MAGNETIC STORMS"
Ya. L. Blokh, L. I. Dorman, N. S. Kaminer

The observed cosmic ray intensity variation during different magnetic storms is compared with those predicted under different suppositions regarding the velocity of corpuscular streams having "frozed" magnetic fields and as to the nature of the Earth's capture by the streams (side or front edge at different distances from the axis of the stream, etc). The stream velocity is obtained and a determination is made of the nature of the Earth's capture by the stream in different cases. The obtained results are compared with date on solar and magnetic activity, and statistic regularities are obtained for the stream velocity and the nature of the Earth's capture for magnetic storms of different types and intensities.

report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959

87467
S/169/60/000/012/005/010
A005/A001

3.1800 (1041, 1062, 1168)
9.9840

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 12, p. 219, # 16268

AUTHORS: Blokh, Ya. L., Glokova, Ye. S., Dorman, L. I.

TITLE: Investigation of the Nature of the Cosmic Ray Effect During the Magnetic Storm on August 29, 1957, on the Basis of Materials From the International Station Network of the IGY

PERIODICAL: V sb.: Variatsii kosmich. luchey pod zemley, na urovne morya i v stratosfere, No. 1, Moscow, AN SSSR, 1959, pp. 7-36

TEXT: The analysis is given of the great intensity decrease of the cosmic rays which began on August 29, 1957. The investigation was performed on the basis of the materials of the international network embracing 50 observation points (77 recording devices). It was stated that the energy spectrum of variation of the primary cosmic rays, which caused the intensity decrease effect, has the form:

$$\delta D(\mathcal{E})/D(\mathcal{E}) = 0.17\,A,$$

where $A = -1$ for $\mathcal{E} < \mathcal{E}_{min}/4$, $A = -(2/\pi)$ arc sin $(\mathcal{E}_{min}/2\mathcal{E}-1)$ for $\mathcal{E}_{min}/4 < \mathcal{E} < \mathcal{E}_{min}/2$, and $A = 0$ for $\mathcal{E} < \mathcal{E}_{min}/2$ and $\mathcal{E}_{min} = 90$ Bev. The analysis results allow

Card 1/2

87467

S/169/60/000/012/005/010
A005/A001

Investigation of the Nature of the Cosmic Ray Effect During the Magnetic Storm on August 29, 1957, on the Basis of Materials From the International Station Network of the IGY

the following interpretation of the observed phenomena. A wide corpuscular stream containing the frozen-in regular magnetic field ($H \approx 10^{-5}$ Gs) hit the Earth with its leading front on August 29. The scattering of the cosmic rays by this field led to the observed intensity decrease. The absence of solar-diurnal variations during this period points out that the direction of the magnetic field in the stream coincided apparently with the ecliptic plane. On September 2, the Earth was hit by the second corpuscular stream having caused a very intense magnetic storm and a new decrease in the cosmic ray intensity. The analysis of the diurnal variations, observed during this period, points out that the magnetic field frozen-in in the stream was oriented perpendicular to the ecliptic plane. The investigation of some phenomena is presented, which accompanied the main effect of intensity decrease: a soft decrease and following increase in intensity before the beginning of the main effect, the alteration of the variation spectrum with time, and others. - There are 16 references. N. S. Kaminer

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

87469

S/169/60/000/012/007/010
A005/A001

3.1800 (1041, 1062, 1168)
9.9700

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 12, p. 219, # 16270

AUTHORS: Blokh, Ya. L., Vernov, S. N., Dorman, L. I., Dubrovin, M. M.

TITLE: Preliminary Results of an Investigation of the Underground Variations of Cosmic Rays

PERIODICAL: V sb.: Variatsii kosmich. luchey pod zemley, na urovne morya i v stratosfere. No. 1, Moscow, AN SSSR, 1959, pp. 37-47

TEXT: The variations of the cosmic ray intensity are investigated on the basis of data obtained from a counter telescope of triple coincidences, which was located under the earth's surface at the depth of 40 m of water equivalent. By the simple-correlation method the value of the barometric coefficient $\beta = (0.021 \pm 0.008)$ %/mb was obtained. The diurnal variation of the underground intensity amounts to about 0.05%. By averaging the data it is shown that the average effect at the depth of 40 m of water equivalent amounts to 0.3% during 11 events of decreases of the Forbush type. The investigation of the disturbed diurnal variations in the cosmic ray intensity was also carried out. N. K.
Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

3.2430 (1482,1559)

28833 S/169/61/000/004/010/026
A005/A130

AUTHORS: Blokh, Ya.L.; Dorman, L.I.; Kaminer, N.S.

TITLE: Determination of the nature of earth's capture by streams, and the properties of corpuscular streams from cosmic ray variations during sundry magnetic storms

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1961, 17, abstract 4 G 100. (Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 4. Moscow, AN SSSR, 1960, 154 - 171)

TEXT: The authors study the variations in intensity of neutron and hard emission components of cosmic rays during magnetic storms for the period 1954 - 1959. The intensity variation profile was determined for each individual instance of Forbush effect and was compared with the theoretical expectancy for different assumptions regarding the velocity of solar corpuscular streams, the nature of earth's capture by streams and the structure of the magnetic field frozen in the stream. The results of analysis are compared with the nature of the geomagnetic disturbances on the earth and the properties of the active area of the sun that corresponds to these disturbances. The authors show that two

Card 1/2

Determination of the nature of earth's capture by....

types of stream exist: 1) long-term extensive streams that capture the earth by their lateral face, and 2) narrow short-term streams carrying intense frozen magnetic fields. Often the narrow streams move within the wide streams. The field intensity in the lateral outstripping section of the stream is on an average twice as great as in the lagging section. The density of kinetic energy in the stream decreases markedly for transition to the lagging lateral section of the stream. In the front section of the stream, substantial compression (by a factor of 6 - 10) of plasma and increase of the frozen magnetic field occur.

N.K.

[Abstracter's note: Complete translation.]

Card 2/2

28834 S/169/61/000/004/011/026
A005/A130

3.2430 (1482, 1559)

AUTHORS: Blokh, Ya.L.; Dorman, L.I.; Kaminer, N.S.

TITLE: The effect of cosmic ray intensity increase preceding magnetic storms

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1961, 17, abstract 4 G 101. (Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 4. Moscow, AN SSSR, 178 - 191)

TEXT: The authors study the effect of cosmic ray intensity increase preceding magnetic storms that is due to acceleration of charged particles incident to their collision with the front of the corpuscular stream traveling from the sun. It is shown that this effect occurred prior to the magnetic storms of July 8, 1958, and August 29, 1957. The longitudinal distributions of the magnitude and of the time of onset of the effect are elucidated. The authors study the energy spectrum of the emission responsible for anisotropic increase of intensity. Analysis of the increase in cosmic ray intensity in the stratosphere on July 8, 1958, suggests to the authors that a magnetic trap may exist in the magnetized frontal section of the corpuscular stream. This trap may carry particles with energies of some hundreds of Mev that have been accelerated in the active region

Card 1/2

28834 S/169/61/000/004/011/026
A005/A130

The effect of cosmic ray intensity increase....

of the sun. Incident to collision of the stream with the earth the trap breaks up and the particles arrive in the high-latitude regions of the earth via the lines of force of the magnetic field. It is shown in agreement with theory that incident to capture of the earth by the lateral face of the stream the effect increase of intensity prior to a magnetic storm does not occur. Capture of the earth by the front section of the stream (storms with sudden onset), on the other hand, is always accompanied by the effect. No effects of acceleration of cosmic ray particles by the shock wave generated by the front of the corpuscular stream was detected.

N. Kaminer

[Abstracter's note: Complete translation.]

Card 2/2

37932

S/035/62/000/005/026/098
A055/A101

3.2410 (2205; 2805)

AUTHORS: Blokh, Ya. L., Dorman, L. I., Kaminer, N. S.

TITLE: Individual cases of the influence of magnetic storms on cosmic rays and their interpretation

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1962, 31, abstract 5A252 (V sb. "Variyatsii kosmich. luchey i solnechn. korpuskulyarn. potoki. no. 2", Moscow, AN SSSR, 1960, 5-57, English's)

TEXT: Approximately 40 cases of the Forbush effect (for the years 1954-1959) are investigated upon the basis of the available data on the hard and the neutron components of cosmic rays. In the analysis of individual Forbush effects, it is assumed that the profile of the effect in the intensity of cosmic rays is determined by the manner in which the Earth comes across the corpuscular stream: the front at different distances from the edge of the stream or a lateral side of the stream. Calculations and a comparison of the intensity variations with the magnetic disturbances and phenomena on the Sun permit the determination of the parameters of the corpuscular streams conditioning the magnetic storms and the Forbush effects, i.e. the width of the streams, the intensity of the frozen-

Card 1/2

S/035/62/000/005/026/098
A055/A101

Individual cases of the influence ...

in magnetic field and its configuration, the density of the stream. Although a considerable spread of these parameters was observed, it proved possible to detect the average regularities. The intensity of the field is considerably higher in the leading lateral part of the corpuscular streams than in the lagging part. Therefore, when the Earth comes across a lateral part of the stream, the drop of the intensity of cosmic rays occurs more rapidly than the return to the normal level. The kinetic energy density also decreases from the front lateral edge to the rear edge of the stream, which explains the shorter duration of geomagnetic storms in comparison with the Forbush effects duration. The front of the stream has a greater density, and the magnetic field intensity is here several times higher than in the rest of the stream. Therefore, when the Earth comes across the front of the stream, a magnetic storm with sudden commencement is observed, as well as a sharp drop of the cosmic rays intensity. A few hours before the Earth comes across the front of the stream, an increase in intensity is observed on the morning-side of the Earth, this increase being conditioned by the reflection of cosmic radiation particles from the moving front of the stream. No such intensity increase is observed when the Earth comes across a lateral side of the stream.

N. Kaminer

[Abstracter's note: Complete translation]

Card 2/2

BLOKH, Ya.L.; GLOKOVA, Ye.S.; KAMINER, N.S.

Barometric effect of cosmic rays. Trudy IAFAN SSSR.Ser. Fiz. no.3: 74-77 '60. (MIRA 13:11)

(Cosmic rays)

S/169/62/000/004/061/103
D228/D302

3.2410

AUTHOR: Blokh, Ya.L.

TITLE: Standard cubic telescope

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 3, abstract 4G17 (V sb. Kosmicheskiye luchi, no. 3, M., AN SSSR, 1961, 80-104)

TEXT: A description is given of a standard cubic telescope, produced at the Institut zemnogo magnetizma i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism and Radiowave Propagation, Academy of Sciences, USSR) for investigating cosmic rays in accordance with the IGY program. [Abstractor's note: Complete translation].

Card 1/1

37286
S/169/62/000/004/071/103
D218/D302

3.2410 (2205, 2705, 2805)

AUTHORS: Blokh, Ya.L., Dorman, L.I., and Dubrovin, M.M.

TITLE: Meteorological effects of cosmic rays under the earth's surface

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 13, abstract 4G70 (V. sb. Kosmicheskiye luchi, no. 3, M., AN SSSR, 1961, 166-169)

TEXT: A study is reported of meteorological effects in the μ-meson component of cosmic rays, based on underground recordings in Moscow (40 m) and Yakutsk (60 m) in 1957 - 1958. The triple-correlation method was used to determine the partial and total correlation and regression coefficients α and β between the observed cosmic-ray intensity variations, the barometric pressure and the temperature of the atmosphere, (β is the barometric coefficient and α is the temperature coefficient representing atmospheric temperature variations up to heights of 12 - 20 km). Although the values of α and β obtained for separate months exhibit a large spread, their average values are quite reliable and are in good agreement with the theoretical

Card 1/2

Meteorological effects of cosmic ... S/169/62/000/004/071/103
D218/D302

results. For Moscow (40 m) : $\beta = (-0.050 \pm 0.007)$ %/mb and for Yakutsk (60 m): $\beta = (-0.029 \pm 0.006)$ %/mb. Comparison of the values of α shows that the upper layers of the atmosphere play an important role in producing the temperature effect in the hard component. [Abstractor's note: Complete translation].

Card 2/2

37289
S/169/62/000/004/074/103
D218/D302

3.9120
3.2410 (2205, 2705, 2805)

AUTHORS: Dorman L.I., Blokh, Ya.L., and Kaminer, N.S.

TITLE: The character of the increase in the cosmic-ray intensity at the Forbush-effect minimum

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 14, abstract 4G73 (V. sb. Kosmicheskiye luchi, no. 4, M., AN SSSR, 1961, 5-15)

TEXT: The method of coupling coefficients is used to investigate the increase in cosmic-ray intensity during the principal phase of geomagnetic storms which is due to a reduction in the H-component of the magnetic field, and the compression of the volume of the geomagnetic field by a corpuscular stream. A theoretical calculation is given of the effects expected in the various secondary components of cosmic rays at sea level and in the mountains. The results of these calculations are compared with experimental data obtained by the world station network during the magnetic storms of September 13, 1957 and February 11, 1958. It follows from the analysis of these two cases that the observed increase in the cosmic-ray intens-

Card 1/2

ity is in fact associated with a reduction in the geomagnetic cut-off threshold during the principal phase of a magnetic storm. It is noted that in the case of the hard component the effect is only partly due to the change in the geomagnetic threshold. A part of the effect is due to a disturbed solar-diurnal variation. It was found that there is not only a latitude, but also a longitude dependence of the amplitude of the increase, and hence it follows that the cavity which appears as a result of the flow of the corpuscular stream round the geomagnetic field is not axially symmetric in form. It is concluded that geomagnetic storms with sudden commencement are produced as a result of the capture of the earth by the leading front of a solar corpuscular stream which flows round the geomagnetic field with ultrasonic velocity. [Abstractor's note: Complete translation].

3,2410 (2205, 2705, 2805)
3,9120

37291
S/169/62/000/004/076/103
D218/D302

AUTHORS: Blokh, Ya.L., Kaminer, N.S., and Dorman, L.I.

TITLE: Cosmic-ray effects preceding a magnetic storm

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 14, abstract 4G75 (V sb. Kosmicheskiye luchi, no. 4, M., AN SSSR, 1961, 25-30)

TEXT: Discusses the interaction of the magnetized front of a corpuscular stream with cosmic rays which may give rise to the appearance of certain effects just before the onset of a magnetic storm. A corpuscular stream produces a shock wave in the interplanetary space, and the magnetic field of this wave interacts with cosmic-ray particles. Reflection of the particles from the wave front gives rise to their acceleration, and therefore the intensity of the radiation should increase before a magnetic storm. The expected spectrum of this variation is relatively soft. After the earth has entered the disturbed medium behind the shock wave front, where the magnetized interplanetary plasma is compressed and the field is correspondingly enhanced, the cosmic-ray intensity should decrease.

Card (1/2)

S/169/62/000/004/076/103
D218/D302

Cosmic-ray effects preceding a ...

This effect is anisotropic and the character of the anisotropy depends on the direction of the interplanetary magnetic field. Reflection of cosmic-ray particles directly from the magnetized front of the moving corpuscular stream should lead to an anisotropic increase in the intensity, a few hours prior to the beginning of the geomagnetic storm. This type of increase in the intensity has in fact been observed before a number of geomagnetic storms accompanied by large Forbush effects. [Abstractor's note: Complete translation].

Card 2/2

37280
S/169/62/000/004/065/103
D228/D302

3,2430

AUTHORS: Kaminer, N.S., Blokh, Ya.L., and Dorman, L.I.

TITLE: The emission duration and the angular width of solar corpuscular flows

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 10, abstract 4G53 (V sb. Kosmich. luchi, no. 4, M., AN SSSR, 1961, 31 - 34)

TEXT: The width of solar corpuscular flows is determined from the profile of Forbush-effects in cosmic rays; this is then compared with the angular width (the longitudinal extent) of the active regions on the sun that have caused the generation of these corpuscular flows. A positive correlation with a correlation coefficient of ~ 0.9 and a regression coefficient of ~ 1 was discovered between these two parameters. The estimation of the angular flow width according to geomagnetic disturbances gives a considerably smaller angular width. The possible causes of the divergences in the estimation of the flow width by these two methods are briefly discussed. A number of arguments are cited in favor of the fact that geoeffecti-

Card 1/2

S/169/62/000/004/065/103
D228/D302

The emission duration and the ...

ve corpuscular flows are continuously emitted by active regions during long intervals of time (several revolutions of the sun). At the same time it is possible that plasma clouds are ejected from an active region when the emission of a corpuscular flow has yet to be completed. [Abstractor's note: Complete translation].

Card 2/2

37293
S/169/62/000/004/078/103
D218/D302

3.24/0 (2205, 2705, 2805)

AUTHORS: Dorman, L.I., Kaminer, N.S., and Blokh, Ya.L.

TITLE: On the nature of the preliminary reduction in the cosmic-ray intensity before a magnetic storm

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 14-15, abstract 4G77 (V sb. Kosmicheskiye luchi, no. 4, M., AN SSSR, 1961, 49-58)

TEXT: A discussion is given of the nature of the preliminary reduction in the cosmic-ray intensity which is observed before the onset of many magnetic storms accompanied by the Forbush effect. The motion of a corpuscular stream with a velocity of $\sim 10^8$ cm/sec through interplanetary medium containing a weak magnetic field, should lead to the appearance of a shock wave moving towards the earth with a velocity equal to 4/3 of the velocity of the stream. The magnetic field of the medium behind the shock wave front is enhanced. Hence, the arrival of the shock wave at the earth should be accompanied by a reduction in the cosmic-ray intensity. If the interplanetary magnetic field is regular, and is directed at right

Card 1/2

angles to the plane of the ecliptic in the same sense as the earth's field, then the maximum reduction in the intensity should be observed for particle streams arriving from the West relative to the sun -earth line. In order to confirm these conclusions on the basis of the world station network data, an analysis was carried out of the cosmic-ray intensity variations during periods preceding major geomagnetic disturbances and Forbush effects. A study of the longitude and latitude dependence of the preliminary reduction in the intensity shows that the effect is particularly appreciable for those groups of stations for which the particles arrive preferentially from the direction of the sun, or from a direction west of the earth-sun line. The spectrum of the preliminary reduction effect is close to the Forbush decrease spectrum, although it is slightly softer than the latter. [Abstractor's note: Complete translation].

S/169/62/000/005/071/093
D228/D307

AUTHORS: Kaminer, N. S., Dorman, L. I. and Blokh, Ya. L.

TITLE: The magnetic storm in mid-May 1959 and cosmic ray variations

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 10, abstract 5G83 (V sb. Kosmich. luchi, no. 4, M., AN SSSR, 1961, 59-83)

TEXT: The intricate complex of phenomena, observed in cosmic rays in connection with the solar chromospheric flare of 10/V/1959, is being studied from the data of the world station network. These phenomena include: the large increase in the intensity of soft cosmic rays of a solar origin in the stratosphere in high latitudes, the Forbush-effect, the intensity increase before the beginning of the geomagnetic storm, etc. A marked increase in the intensity of cosmic rays was noted for several days before the start of the Forbush-effect. The peculiarities of this phenomenon compel one to assume that it is due to the arrival of an additio-

Card 1/3

S/169/62/000/005/071/093
D228/D307

nal radiation flow, generated on the sun and coming towards the earth as a result of diffusion in magnetic irregularities with a field intensity of $\sim 3 \times 10^{-4} - 10^{-3}$ gauss. The beginning of the Forbush effect of May 11 occurred simultaneously throughout the world. In the first place the reduction's effect started at stations where particles, coming from westwards directions in relation to the line sun-earth, were recorded. At these stations the reduction's effects began three hours before the outbreak of the geomagnetic storm. For particles arriving from eastwards directions in relation to the line sun-earth, the effect commenced 2 - 3 hours after the beginning of the storm. The epigenetic spectrum of the primary radiation's variation during the Forbush effect was determined. This spectrum agrees with the supposition that cosmic rays are scattered by the regular magnetic field frozen into the flow. The parameters of the corpuscular flow and of the magnetic field frozen into it were ascertained from the profile of the Forbush effect. The flow's width amounts to 5×10^{13} cm, the mean intensity of the field in it being $\sim 6 \times 10^{-6}$ gauss.

Card 2/3

S/169/62/000/005/071/093
D228/D307

The nature of the increase in the intensity in the minimum of the Forbush effect, observed on May 12-14, is discussed. It is shown that only a small part of the effect of the intensity's increase is explained by the change in the geomagnetic trimming threshold; the main cause of this phenomenon may be the anisotropic screening of the earth by the corpuscular flow. [Abstracter's note: Complete translation.]

Card 3/3

37294

S/169/62/000/004/079/103
D218/D302

3.2400 (2205, 2705, 2805)

AUTHORS: Blokh, Ya.L., Dorman, L.I., and Kaminer, N.S.

TITLE: On the superposition of Forbush effects in July 1959

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 4, 1962, 15, abstract 4G78 (V sb. Kosmicheskiye luchi, no. 4, M., AN SSSR, 1961, 84-95)

TEXT: A detailed study is reported of the character of the superposition of Forbush effects in July 1959. Analysis of world station network data showed that the observed phenomena may be explained by assuming that the modulation of cosmic rays is due to regular magnetic fields frozen into corpuscular streams. The second and third Forbush decreases occurred as a result of the simultaneous capture of the earth by two or even three corpuscular streams. The properties of these streams, their dimensions and the intensity of the frozen-in magnetic fields are determined. The energy spectrum of the increase in the cosmic-ray intensity observed on July 17 is determined. Analysis of this effect is used to estimate the intensity of the magnetic field of the stream which is found to be in good

Card 1/2